General

Guideline Title

Nasopharyngeal cancer treatment.

Bibliographic Source(s)

Alberta Provincial Head and Neck Tumour Team. Nasopharyngeal cancer treatment. Edmonton (Alberta): CancerControl Alberta; 2013 Dec. 17 p. (Clinical practice guideline; no. HN-003). [36 references]

Guideline Status

This is the current release of the guideline.

Regulatory Alert

FDA Warning/Regulatory Alert

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- December 14, 2016 – General anesthetic and sedation drugs : The U.S. Food and Drug Administration (FDA) is warning that repeated or lengthy use of general anesthetic and sedation drugs during surgeries or procedures in children younger than 3 years or in pregnant women during their third trimester may affect the development of children's brains. Consistent with animal studies, recent human studies suggest that a single, relatively short exposure to general anesthetic and sedation drugs in infants or toddlers is unlikely to have negative effects on behavior or learning. However, further research is needed to fully characterize how early life anesthetic exposure affects children's brain development.

Recommendations

Major Recommendations

The Alberta Provincial Head and Neck Tumour Team have adopted the recommendations of the National Comprehensive Cancer Network (NCCN), with modifications to fit the Alberta context (see the "Adaptation" field).

1. Diagnosis and baseline investigations. The following investigations are recommended at diagnosis for all patients with suspected or confirmed early stage nasopharyngeal cancer (NPC):
    - Complete head and neck examination

- Nasopharyngeal exam and biopsy
- Chest imaging
- Magnetic resonance imaging (MRI) with gadolinium of nasopharynx and base of skull to clavicles and/or computed tomography (CT) with contrast
- Positron emission tomography-computed tomography (PET-CT), as indicated; especially for nonkeratinizing histology, endemic phenotype, N2–3 disease, or stage III–IV disease
- Examination under anesthesia with endoscopy, as indicated
- Dental evaluation
- Nutrition, speech and swallowing evaluation/therapy and audiogram

2. Treatment options. Patient participation in clinical trials is recommended. For standard treatment, all cases should be presented and discussed at a multidisciplinary Tumour Board to decide the best treatment option for each patient.
   Early-stage (T1, N0, M0): Definitive radiotherapy (RT) to the nasopharynx and elective RT to the neck is recommended.

   - Primary:
     - Total dose: 66–70 Gy
     - Conventional fraction dose: 2.0–2.2 Gy
     - Daily Monday–Friday in 6–7 weeks
   - Neck:
     - Uninvolved nodal stations: 54–60 Gy
     - Conventional fraction dose: 1.6–2.0 Gy

   Intensity-modulated radiation therapy (IMRT) should be used to reduce critical structure doses to acceptable levels.

   Please see the early-stage treatment algorithm in the original guideline document.

   Advanced-stage (T1, N1–3; T2–4, Any N, M0): Concurrent chemoradiotherapy (chemoRT) with cisplatin is recommended. Adjuvant chemotherapy using platinum (cisplatin or carboplatin)/5-fluoruracil (5-FU) can be considered following primary treatment. The choice of chemotherapy should be individualized based on patient characteristics (performance status and goals of therapy). Where there is clinical evidence of residual disease in the neck, neck dissection is recommended, if feasible.

   Please see the advanced-stage treatment algorithm in the original guideline document.

   Distant metastatic disease (Any T, Any N, M1): All treatment of patients with distant metastatic disease is palliative in nature. If available, patients should consider participating in a clinical trial. Palliative RT can be considered in select cases. In patients with good performance status, palliative chemotherapy may be considered. Referral to palliative care services can be offered to patients.

   Please see the distant metastatic disease treatment algorithm in the original guideline document.

   Recurrent or persistent disease: Restaging should be done to assess local, regional and distant disease. Biopsy of recurrent lesion(s) is recommended, as clinically indicated. Treatment should be individualized based on patient performance status and extent of disease.

   Treatment options include:

   - Salvage nasopharyngectomy, or
   - Re-irradiation with brachytherapy, and/or
   - Stereotactic guided treatments

   Please see the recurrent or persistent disease treatment algorithm in the original guideline document.

3. Follow-up and surveillance: The following schedule should be taken into account to manage complications related to treatment, to detect disease recurrence and/or the development of new disease:
   - Head and neck examination (note that the ranges are based on risk of relapse, second primaries, treatment sequelae, and toxicities):
     - Year 1, every 1–3 months
     - Year 2, every 2–6 months
     - Year 3–5, every 4–8 months
     - After 5 years, annually, as clinically indicated
   - Post-treatment baseline imaging of primary and neck, if treated, within 6 months of treatment for T3–4 or N2–3 disease only; further reimaging, as indicated
   - Annual thyroid-stimulating hormone (TSH) screening up to 5 years
   - Speech/swallowing assessment at 6 and 12 months post-RT; additional assessment and rehabilitation, as clinically indicated

- Hearing evaluation and rehabilitation, as clinically indicated
- Follow-up with a registered dietitian to evaluate nutritional status and until the patient achieves a nutritionally stable baseline
- Routine hospital-based dental follow-up and evaluation up to 3 years

Clinical Algorithm(s)

The following algorithms are provided in the original guideline document:

- Early-stage (T1, N0, M0)
- Advanced-stage (T1, N1–3, T2–4, Any N, M0 and Any T, N, M1)
- Recurrent or Persistent Disease

Scope

Disease/Condition(s)

Nasopharyngeal cancer (NPC)

Guideline Category

Diagnosis

Evaluation

Management

Treatment

Clinical Specialty

Nutrition

Oncology

Otolaryngology

Radiation Oncology

Radiology

Speech-Language Pathology

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Dentists

Dietitians

Nurses

Physician Assistants

Physicians

Speech-Language Pathologists

Guideline Objective(s)

To outline treatment recommendations for patients with nasopharyngeal cancer (NPC)

Target Population

Adults over the age of 18 years with nasopharyngeal cancer (NPC)

Note: Different principles may apply to pediatric patients.

Interventions and Practices Considered

Diagnosis/Evaluation

1. Complete head and neck examination
2. Nasopharyngeal exam and biopsy
3. Chest imaging
4. Magnetic resonance imaging (MRI) with gadolinium of nasopharynx and base of skull to clavicles and/or computed tomography (CT) with contrast
5. Positron emission tomography-computed tomography (PET-CT), as indicated
6. Examination under anesthesia with endoscopy, as indicated
7. Dental evaluation
8. Nutrition, speech and swallowing evaluation/therapy and audiogram

Treatment/Management

1. Participation in clinical trials
2. Radiotherapy
3. Intensity-modulated radiation therapy (IMRT)
4. Concurrent chemoradiotherapy with cisplatin
5. Adjuvant chemotherapy using platinum (cisplatin or carboplatin)/5-fluoruracil [5-FU])
6. Palliative radiotherapy or chemotherapy for distant metastases
7. Treatment of recurrent or persistent disease
8. Follow-up and surveillance

Major Outcomes Considered

- Survival rates (overall, progression-free, relapse-free, metastasis-free)
- Recurrence rates
- Quality of life
- Toxicity and complications of treatment

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Research Questions

Specific research questions to be addressed by the guideline document were formulated by the guideline lead(s) and Knowledge Management (KM) Specialist using the PICO question format (patient or population, intervention, comparisons, outcomes).

Guideline Questions

1. What diagnostic and baseline investigations are recommended for patients with suspected or confirmed nasopharyngeal cancer (NPC)?
2. What are the recommended treatment options for NPC?
3. What is the recommended follow-up after treatment for NPC?

Search Strategy

PubMed, MEDLINE and Cochrane Database of Systematic Reviews were searched from 2000 to April 5, 2013 for literature on the treatment of NPC. The search term *nasopharyngeal neoplasm* (MeSH) was used. Results were limited to phase III clinical trials, comparative studies, controlled clinical trials, guidelines, meta-analyses, multicenter studies, practice guidelines, randomized controlled trials and systematic reviews involving human subjects (19+ years) and published in English. Although phase II studies may be referenced in the discussion section, only phase III randomized studies and meta-analyses were considered for the literature search and review.

The National Guideline Clearinghouse and Standards and Guidelines Evidence (SAGE) Directory of Cancer Guidelines were also searched from 2008 to April 5, 2013 for guidelines on NPC.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Not stated

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Evidence was selected and reviewed by a working group comprised of members from the Alberta Provincial Head and Neck Tumour Team and a Knowledge Management (KM) Specialist from the Guideline Utilization Resource Unit (GURU). A detailed description of the methodology followed during the guideline development process can be found in the Guideline Utilization Resource Unit Handbook (see the "Availability of Companion Documents" field).

Evidence Tables

Evidence tables containing the first author, year of publication, patient group/stage of disease, methodology, and main outcomes of interest are assembled using the studies identified in the literature search. Existing guidelines on the topic are assessed by the KM Specialist using portions of the Appraisal of Guidelines Research and Evaluation (AGREE) II instrument (http://www.agreetrust.org) and those meeting the minimum requirements are included in the evidence document. Due to limited resources, GURU does not regularly employ the use of

multiple reviewers to rank the level of evidence; rather, the methodology portion of the evidence table contains the pertinent information required for the reader to judge for himself the quality of the studies.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Formulating Recommendations

The working group members formulated the guideline recommendations based on the evidence synthesized by the Knowledge Management (KM) Specialist during the planning process, blended with expert clinical interpretation of the evidence. As detailed in the Guideline Utilization Resource Unit Handbook (see the "Availability of Companion Documents" field), the working group members may decide to adopt the recommendations of another institution without any revisions, adapt the recommendations of another institution or institutions to better reflect local practices, or develop their own set of recommendations by adapting some, but not all, recommendations from different guidelines.

The degree to which a recommendation is based on expert opinion of the working group and/or the Provincial Tumour Team members is explicitly stated in the guideline recommendations. Similar to the American Society of Clinical Oncology (ASCO) methodology for formulating guideline recommendations, the Guideline Utilization Resource Unit (GURU) does not use formal rating schemes for describing the strength of the recommendations, but rather describes, in conventional and explicit language, the type and quality of the research and existing guidelines that were taken into consideration when formulating the recommendations.

For the current guideline, the Alberta Provincial Head and Neck Tumour Team reviewed the recommendations of several different guidelines, including those from the European Society for Medical Oncology, the Spanish Society of Medical Oncology and the National Comprehensive Cancer Network (NCCN). The Alberta Provincial Head and Neck Tumour Team have adopted the recommendations of the NCCN, with modifications to fit the Alberta context.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This guideline was reviewed and endorsed by the Alberta Provincial Head and Neck Tumour Team, which is comprised of over 150 health care professionals from various disciplines.

When the draft guideline document has been completed, revised, and reviewed by the Knowledge Management Specialist and the working group members, it is sent to all members of the Provincial Tumour Team for review and comment. This step ensures that those intended to use the guideline have the opportunity to review the document and identify potential difficulties for implementation before the guideline is finalized. Depending on the size of the document, and the number of people it is sent to for review, a deadline of one to two weeks will usually be given to submit any feedback. Ideally, this review will occur prior to the annual Provincial Tumour Team meeting, and a discussion of the proposed edits will take place at the meeting. The working group members will then make final revisions to the document based on the received feedback, as appropriate. Once the guideline is finalized, it will be officially endorsed by the Provincial Tumour Team Lead and the Executive Director of

Provincial Tumour Programs.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The Alberta Provincial Head and Neck Tumour Team adopted the recommendations of the National Comprehensive Cancer Network (NCCN), with modifications to fit the Alberta context (see the "Adaptation" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate nasopharyngeal cancer (NPC) treatment

Potential Harms

Complications and toxicity related to treatment, including xerostomia, leukopenia/neutropenia, nausea/vomiting, and mucositis

Qualifying Statements

Qualifying Statements

- The recommendations contained in this guideline are a consensus of the Alberta Provincial Head and Neck Tumour Team and are a synthesis of currently accepted approaches to management, derived from a review of relevant scientific literature. Clinicians applying these guidelines should, in consultation with the patient, use independent medical judgment in the context of individual clinical circumstances to direct care.
- These guidelines should be applied in the context of the recommendations outlined in CancerControl Alberta guideline The Organization and Delivery of Healthcare Services for Head and Neck Cancer Patients .

Implementation of the Guideline

Description of Implementation Strategy

- Present the guideline at the local and provincial tumour team meetings and weekly rounds.
- Post the guideline on the Alberta Health Services Web site.
- Send an electronic notification of the new guideline to all members of CancerControl Alberta.

Implementation Tools

Clinical Algorithm

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report

Categories

IOM Care Need

End of Life Care

Getting Better

Living with Illness

IOM Domain

Effectiveness

Identifying Information and Availability

Bibliographic Source(s)

Alberta Provincial Head and Neck Tumour Team. Nasopharyngeal cancer treatment. Edmonton (Alberta): CancerControl Alberta; 2013 Dec. 17 p. (Clinical practice guideline; no. HN-003). [36 references]

Adaptation

The Alberta Provincial Head and Neck Tumour Team adopted the recommendations from the following source, with modifications to fit the Alberta context: National Comprehensive Cancer Network. Head and neck cancers: version I.2013. 2013; Available at: http://www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf .

Date Released

2013 Dec

Guideline Developer(s)

CancerControl Alberta - State/Local Government Agency [Non-U.S.]

Source(s) of Funding

CancerControl Alberta

Guideline Committee

Alberta Provincial Head and Neck Tumour Team

Composition of Group That Authored the Guideline

Members of the Alberta Provincial Head and Neck Tumour Team include medical oncologists, radiation oncologists, head and neck surgeons, head and neck reconstructive surgeons, oral and maxillofacial surgeons, dentists, neuroradiologists, nurses, speech and language pathologists,

pathologists, pharmacists, and other allied health professionals.

Financial Disclosures/Conflicts of Interest

Participation of members of the Alberta Provincial Head and Neck Tumour Team in the development of this guideline has been voluntary and the authors have not been remunerated for their contributions. There was no direct industry involvement in the development or dissemination of this guideline. CancerControl Alberta recognizes that although industry support of research, education and other areas is necessary in order to advance patient care, such support may lead to potential conflicts of interest. Some members of the Alberta Provincial Head and Neck Tumour Team are involved in research funded by industry or have other such potential conflicts of interest. However the developers of this guideline are satisfied it was developed in an unbiased manner.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the Alberta Health Services Web site .

Availability of Companion Documents

The following is available:

- Guideline utilization resource unit handbook. Edmonton (Alberta): CancerControl Alberta; 2013 Jan. 5 p. Electronic copies: Available from the Alberta Health Services Web site .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on August 12, 2014. The information was verified by the guideline developer on September 25, 2014. This summary was updated by ECRI Institute on February 15, 2017 following the U.S. Food and Drug Administration advisory on general anesthetic and sedation drugs.

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